

1. An apparatus for receiving, storing, and dispensing a stranded material, the apparatus comprising:

a tubular member having an axial direction and a radial direction, configured to receive a stranded material wrapped therearound; and

5 a first flange configured to engage the tubular member and comprising

a core portion, having an arbor aperture therein and configured to support the apparatus on an arbor through the arbor aperture,

an outer portion extending radially away from the core portion to an outer edge and configured to restrain the stranded material in an axial direction, and

10 the core portion being corrugated to comprise a plurality of web portions, each web portion of the plurality of web portions being offset axially from an adjacent web portion.

2. The apparatus of claim 1, wherein the core portion further comprises a plurality

15 of connecting walls, each connecting wall of the plurality of connecting walls being configured to extend between two adjacent web portions of the plurality of web portions.

3. The apparatus of claim 1, wherein the first flange further comprises a base, having corrugations, and a closure, and wherein the closure is configured to stiffen the first flange

20 by creating a closed cross-section in corrugations of the base.

4. The apparatus of claim 1, further comprising a second flange configured to engage the tubular member, the tubular member further configured to secure to the first and second flanges to support an axial tensile force therebetween.

5 5. The apparatus of claim 1, wherein the outer portion is substantially flat.

6. The apparatus of claim 5, wherein the outer edge further comprises a raised rim.

7. The apparatus of claim 1, wherein the outer portion is ribbed.

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8. The apparatus of claim 7, wherein the outer portion ribs are further configured to have a plurality of corrugations alternatingly displaced in a circumferential direction along a radial path.

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9. The apparatus of claim 1, wherein the outer portion is corrugated.

10. An apparatus for receiving, storing, and dispensing a stranded material, the apparatus comprising:

a tubular member having an axial direction and a radial direction, configured to receive a stranded material wrapped therearound;

5 a first flange configured to engage the tubular member and comprising

an arbor wall defining an arbor aperture and configured to support the apparatus on an arbor through the arbor aperture, and

an outer portion extending radially away from the arbor wall to an outer edge and configured to restrain the stranded material in an axial direction,

10 a second flange configured to engage the tubular member opposite the first flange;

and

the first flange wherein the outer portion is configured to have a plurality of corrugations in which each corrugation thereof extends from substantially the arbor wall to substantially the outer edge.

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11. The apparatus of claim 10, wherein the tubular member is further secured to the first and second flanges to support an axial tensile force therebetween.

20 12. The apparatus of claim 10, wherein the first flange further comprises a base and closure secured together to stiffen the first flange by creating a closed cross-section in substantially the each corrugation of the plurality of corrugations.

13. The apparatus of claim 10, wherein the corrugations of the outer region further comprise outer webs, offset from one another, and connector walls extending between adjacent outer webs.

5 14. The apparatus of the claim 10, further comprising a second flange configured to engage the tubular member opposite the first flange.

15. The apparatus of claim 10, wherein each corrugation thereof extends from substantially the arbor wall to substantially the outer edge.

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16. An apparatus for receiving, storing, and dispensing a stranded material, the apparatus comprising:

a tubular member defining axial, radial, and circumferential directions and shaped to receive a stranded material wrapped therearound;

5 a first flange engaging the tubular member and comprising an arbor wall defining the perimeter of a centrally located arbor aperture and an outer portion surrounding the arbor wall and extending away therefrom in the radial direction to an outer edge, the outer portion providing a restraint to the stranded material in the axial direction; and

10 the outer portion formed as a plurality of corrugations in which at least one corrugation thereof directly contacts the arbor wall and extends therefrom to substantially the outer edge.

17. The apparatus of claim 16, wherein the tubular member is secured to the first flange to support a tensile force in the axial direction therebetween.

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18. The apparatus of claim 17, where the plurality of corrugations comprise a plurality of web portions arranged to be discontinuous in the circumferential direction and to extend away from the arbor wall in the radial direction, each web portion of the plurality of web portions being offset in the axial direction from an adjacent web portion.

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19. The apparatus of claim 18, wherein the plurality of corrugations comprise a plurality of connecting walls, each connecting wall of the plurality of connecting walls extending between two adjacent web portions of the plurality of web portions.

5 20. The apparatus of claim 19, wherein each corrugation of the plurality of corrugations directly contacts the arbor wall and extends away therefrom to substantially the outer edge.